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The contribution of special education students' clinical work to their sense of self efficacy: A preliminary research

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Abstract

Oranim Academic College runs a unique teacher education program for special education. Many resources are invested in the clinic in order to create skilled and professional teachers. As a consequence of the intensive work we hypothesized that at the end of the year, students' sense of self efficacy as special education teachers would be higher, relative to the beginning of the year. In order to investigate this question a quantitative preliminary research was conducted in which a questionnaire was administered at the beginning and at the end of the academic year to 3rd year students participating in the clinic (n=63). Findings indicated that a significant difference in student teachers' sense of self efficacy as teachers before and after participation in the clinic was not found. This finding may be due to ceiling effect. An additional explanation is that the students' feelings that they could advance their pupils was reduced as the children's' advance in the clinic was not expressed in a notable enough way in their home class These findings raise important questions regarding the training of special education teachers. Future research will investigate if, after experiencing a year's work as special education teachers, the clinic's contribution to self-efficacy will be more obvious.
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Keywords: Effective Teacher Education; Self Efficacy

1. Introduction

Self-efficacy is defined as a person's confidence regarding the ability to organize and execute actions that will enable him to achieve desirable outcomes in future situations (Bandura, 2002). According to Bandura, the level of motivation and the actions that one takes are based more on beliefs concerning the situation than on an objective analysis of it.

Armor, Conroy, Cox, King, McDonnel, Paskal. Pauly & Zellman, (1976) claim that a teacher's sense of self-efficacy is a combination of two components: general sense of self-efficacy and personal self-efficacy. This second element relates to the teacher's belief that based on his qualifications, he will manage to advance his pupils even in difficult situations. Similarly, Woolfolk-Hoy (2004) defines a teacher's self-efficacy as the teacher's belief regarding

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his ability to influence his pupils' learning process, including those pupils that are slow and/or lack motivation. Freidman and Kess (2000), also say that the teacher's belief that he can advance his pupils as a component of the teachers' sense of self efficacy but discuss additional elements too: the type of relationship between the teacher and pupils and the teacher's feeling regarding his ability to influence decision making in the school and progress in the organization.

Several studies have established a connection between a teacher's sense of self-efficacy and his professional success (e.g. Ross & Cousins 1993, Ashton & Webb 1986, Moore & Esselman, 1992, Pendergast, Garvis & Keogh, 2011). The findings in these studies indicate, that both in mathematics and in language related subjects a correlation is found between the teacher's self-efficacy and their pupils' grades. In addition, teachers that convey high efficacy beliefs show greater resilience and are more likely to attempt to lead all their students to success. Teachers with low levels of self-efficacy, on the other hand, respond less to their pupils' needs (Pendergast, Garvis & Keogh, 2011). Moreover, high levels of self-efficacy are related to approaches towards learning and teaching. It has been found, for example, that teachers with higher levels of efficacy were more inclined to accept the inclusion of learning disabled pupils and pupils that have behavior problems in regular classes, than teachers with lower levels of self-efficacy (Soodak , Podell & Lehman, 1998). Self-efficacy is also connected to concepts relating to motivation and learning (Hutchison, Follman. Sumpter & Bonder, 2006). Students with high levels of self-efficacy evaluate their academic work as more effective, they solve problems in a more efficient way and their perseverance is higher than students with lower levels of self-efficacy. They also work in a more organized way on their assignments and use self-regulation strategies that improve their success (Schunk & Pajares, 2005).

According to Bandura (2002) four main factors influence the development of efficacy beliefs. The first is mastery experiences: the extent of success in former experiences. The additional factors are vicarious experiences supplied by social models, verbal persuasion by significant others that one has the ability to succeed and the enhancement of physical and emotional arousal. Nevertheless, self-efficacy beliefs are specific to the situation and differ accordingly in different circumstances (Tsachennen-Moran, et al, 1988). That is to say that expectations that are related to a sense of self efficacy and are specific to the situation enable us to estimate if we can execute an assignment at the desired level (Swackhamer, Koellner, Basile & Kimbrough, 2009).

According to Tschannen-Moran et al (1998), in the case of teachers, success leads to higher efficacy beliefs while failure decreases self-efficacy (Tschannen-Moran, Woolfolk Hoy & Hoy, 1998). Therefore, one may conclude that for student teachers, success in assignments that are related to their training (e.g. experience as teachers in classes, clinical work or course grades) will influence the way they appraise their ability as teachers. In addition, among young teachers, who have less experience, other factors such as support from others and information resources available to them have stronger influence on self-efficacy compared to more experienced teachers (Tschannen-Moran & Woolfolk Hoy, 2007).

Student teachers' sense of self efficacy is inclined to become stronger during the course of their training (Hoy & Spero, 2005, Wenner, 2001). The reason for this growth is, according to Tshannen-Moran et al (2007), the significant support the students experience during their studies. Howe (2006), in his analysis of excellent teacher training programs in various countries found that in spite of the differences between these programs, they all emphasized, among other things, the professional guidance of the students by experienced mentors or counselors. The amount of direction that student teachers received during their training was related to their self efficacy (Hamman, Olivarez, Lesley, Button, Chan, Griffith, & Elliot, 2006)

The feedback given by these experienced counselors will influence the students' sense of self efficacy by enriching reflective processes, giving assurance they can accomplish assignments related to teaching or, alternatively, convincing them that they can't accomplish them (Lamote & Engles, 2010). In other words the feedback serves as verbal persuasion and influences the students' self- efficacy. Nevertheless, this feedback will only be effective if it is credible and the student conceives it in this way and relates to it during his reflection (Usher & Pajares, 2008). These reflective processes are one of the key foundations of effective teacher training (Howe, 2006).

In sum, one can assume that in situations in which student-teachers experience successful instruction, receive a considerable amount of supportive feedback by professional experts, are accompanied by these experts continuously throughout the instructional process and don't experience a calm learning atmosphere a high level of efficacy beliefs will be established.

The Halel clinic at Oranim academic college

Oranim Academic College runs unique training program for student teachers studying special education. During their work in the clinic, 3rd year students teach maths and reading to children who have difficulties in coping with their school studies. These are individual lessons and each student teaches two pupils, one in each of the areas detailed above.

The work in the clinic is based on an integrative model that draws from educational theories that relate not only to proficiency skills required for creating professional teachers (D'Amato et al, 2005, Jimerson et al, 2007), but also to issues regarding effective teacher education (Darling-Hammond ,2006).

The participation in the clinic includes two components:

a. Two courses, one in language/reading and the other in math in which the students are taught general learning strategies in these areas and learn ways to teach these strategies to their pupils.
b. Each student is accompanied by two professional supervisors, experts in the area of learning disabilities (one who specializes in language/reading and one in math). The supervisors observe the students' lessons and meet each student at least once every two weeks for a personal meeting. These meetings have several goals: fine-tuning the learning strategies acquired in the course to the personal needs of the students' pupils, supervision of the lesson plans (goals, ways for attaining them and feedback on the lessons after they have been taught). In addition the students raise professional questions that arise during the process.

The work process in the clinic starts with an evaluation of the pupil's learning level and of learning processes that can explain the pupil's difficulties. This evaluation is based on knowledge and skills that the students acquired in the former years of their studies. Based on this evaluation an intervention program is built. This program has two goals: getting the pupil to improve his own level of mastery and decreasing the gap relative to the norm in the pupil's class. At the end of the year a repeat evaluation is conducted in order to evaluate the pupil's progress.

As one can see the HALEL clinic program takes into account many variables that promote students high efficacy beliefs. The question that this paper sets out to answer pertains to the clinic's contribution to students' efficacy beliefs regarding their ability to work as special education teachers. It was assumed that as a consequence of the clinic's structure, students attending the clinic would demonstrate higher efficacy beliefs at the end of the year in comparison to the beginning of the year.

2. **The study:**

In order to investigate these questions a quantitative research was conducted in which a questionnaire was administered at the beginning and at the end of the academic year to 3rd year students participating in the clinic (n=63). The findings that will be reported in the current paper are part of a larger questionnaire that was composed of 33 close-ended questions (Likert scale) that measured efficacy beliefs and variables that, according to the literature, influence self-efficacy/ these are the way the students conceive the college atmosphere, their former experiences in school teaching during their studies and their expectations regarding their studies. The subjects' view point was assessed along a 5-point continuum (1-not al all and 5-a great deal). Due to the fact that the question that will be addressed in the current paper refers to the existence of differences in efficacy beliefs at the beginning and the end of the year, we, will be reporting solely on the student teachers' efficacy scale which consisted of 8 items. Reliability of the scale was 0.86 .

The 63 students who answered the questionnaire are 76% of the third year students who took part in the clinic in that academic year. All the examinees, apart from one, are females. Their average age was 26 (sd=2) and 68% of them were unmarried.

Findings and discussion

Comparison of the average sense of efficacy that students felt at the beginning and at the end of the year (3.91 and 4.08 respectively) reveals that a significant difference was not found (t=1.89, p=.063). Nevertheless, as can be seen in table one, a comparison of each statement at the beginning and the end of the year points to the fact that in four of the eight statements the students' efficacy beliefs at the end of the year were higher than at the year's. At the end of the year the students felt significantly more ready to teach and diagnose learning disabled pupils, they felt they had a better ability to use alternative teaching methods and were more confident of their ability to teach even the weakest pupils. However, in contrast to the expectations, a significant decrease was found in the students' conviction that the teacher can effect the pupils class grades.

Table 1- differences in self-efficacy at the beginning and end of the year

statement	Average self- efficacy at the beginning of the year (sd)	Average self-efficacy at the end of the year (sd)	t (sig)	df
If a pupil finds it hard to remember information taught in a previous lesson I know what to do in order to improve his memory	3.89 (.698)	4.10 (.759)	1.84 (.070)	58
I have the ability to teach even the weakest pupils	3.77 (.777)	4.08 (.690)	2.13 (.037)*	59
If a pupil has a problem completing an assignment I can tailor it to match it to his level	4.05 (.664)	3.93 (.772)	-.94 (.350)	59
I am able to diagnose my pupils' successfully and understand the nature of their difficulties	3.69 (.861)	4.23 (.589)	3.87 (.000)**	59
I have the ability to match my teaching method to the pupils' needs	3.82 (.661)	3.93 (.873)	.85 (.397)	59
I can think of alternative teaching methods that will help the weak students	3.82 (.736)	4.10 (.724)	2.02 (.048)*	59
I can teach learning disabled pupils successfully	3.69 (.692)	5.15 (.697)	3.91 (.000)**	59
I am persuaded that the teacher can effect pupils grades	4.51 (.592)	4.15 (.732)	-2.84 (.006)*	59

*p≤.05, **p≤.005

Efficacy beliefs were investigated in this preliminary research by the use of statements that relate to student-teachers' concept of their ability to deal with their pupils' special needs. It was found that at the beginning of the academic year students' efficacy beliefs ranged between medium and high. The students, if so, start their participation in the clinic with a relatively high concept of their abilities to teach learning disabled pupils and pupils with difficulties. The absence of a significant difference between the beginning and the end of the year may be a consequence of a ceiling effect due to the high (and perhaps unrealistic) level of efficacy beliefs at the beginning of the year.

Similar finding that indicated higher efficacy at the end of the year relative to it's beginning, were found by Pendergast, Garvis & Keogh (2011). In their research student teachers that studied in three different programs (early childhood, primary and secondary education) rated their self-efficacy beliefs at the beginning and the end of their studies. Their findings, similar to the ones of the current research, reveal lower levels of self-efficacy towards the end of the teacher education program relative to earlier stages of their studies. They explain that these findings may be a result of the students developing deeper understanding of teaching. This understanding, they suggest, is due to the university studies and their experience as teachers in classrooms. Although the subjects in the Pendergast research were first year students and the ones in the current research were third year students with experience of two years of studies and serving as a student teachers in classrooms, it may be that a similar explanation is valid here too. Even though the students had former teaching experience, the process they underwent in the clinic, which includes thorough guidance ,supervision and reflective processes gives them a profounder understanding of the complexities of the teaching profession.

An examination of the differences, found in the current research, between each statement separately, points to the fact that four of the eight statements were graded in a significantly higher level at the end of the year compared to the beginning of the year. Accordingly, students felt that at the end of the year they had improved their ability to teach even the most difficult pupils, diagnose their students' difficulties, plan an intervention program according to the diagnosis and think of alternative approaches to teaching their pupils. In contrast, and contrary to expectations, at the end of the year students felt they had a *lower* ability to dramatically influence their pupils' school grades.

An explanation for this finding may be found in the structure of the clinic. Achievements of the pupils' learning in the clinic are not assessed in the traditional way as they are done in schools. No tests and no grades are given to the pupils. In the feedback sessions with the counselors the students report that, while teaching individually they see progress in the pupils abilities. Nevertheless, it may be that they feel that this relative improvement is not expressed in a significant way in the pupils' school grades. The main factor that could be responsible for this might be the differences between the nature of individual, one on one, lessons and those of a much larger classroom lesson (eg: the inability to match the material efficiently enough to the specific pupil's ability, the absence of sufficient mediation, behavior problems that surface in the bigger classroom but are absent from the individual lesson).

A supplementary cause that may explain the lack of sufficient improvement in the home classroom is the absence of a strong enough correlation between the teaching process that is initiated in the clinic and the teaching that is given in the home-class. Nowadays, it is understood that children with learning disabilities must learn to cope with the general education curriculum and assignments (Brownell, et al, 2010). Nevertheless, while working with a struggling pupil, at the first stages of the process one starts at the pupil's current level while controlling task difficulty and sequencing the assignment level in order to sustain pupil's success (Vaughn, 2000). Based on the diagnosis done at the beginning of the year, the intervention program in the HALEL clinic is designed according to these principles. Thus, intervention starts, in most cases lower than the class level. Inadequate contact between the clinic and the school may be the outcome of variables such as communication difficulties between the home-class teacher and the student teaching the child in the clinic. This connection is critical for the pupil's progress as it enables the home-class teacher to encourage pupils to use strategies acquired in the clinic in the classroom and it enables the students to relate more the classroom curriculum.

Implications

In all, we can see that the current work points to the fact that student teachers' efficacy beliefs are a complex area. Additionally this work points to the fact that the structure of the teacher education program influences students teachers' efficacy beliefs. The findings in the current research, which point to lower beliefs in average self-efficacy at the end of the year may be explained by the hypothesis that the thorough supervision given to the students teaching in the HALEL clinic, may have led them to a deeper understanding of how complicated the act of teaching is, thus affecting students' feelings regarding their ability to serve as successful teachers. Former research suggests that although efficacy beliefs mostly increase during teacher education (Hoy & Woolfolk, 1990; Wenner, 2001) they lessen during the first year of teaching (Woolfolk Hoy, 2000) while meeting the complicated "real world". It may be that the in-depth supervision our students received during the third year of their studies enabled this process to occur at an earlier stage so that the students went through this developmental phase while they could still be enveloped by the support given in the clinic via their personal supervisors. Further research which will investigate self-efficacy beliefs of students, graduates of the HALEL clinic, towards the end of their first year of teaching can clarify this hypothesis.

Additionally, the findings in this research emphasize two points which relate to the way the clinic functions. Firstly, it underlines the importance of the combination of the two principles that form the basis of the clinic: 1. The two courses that .the students study, and 2. The thorough supervision the students receive while teaching in the clinic. The combination of these two elements enables the students to deepen their perceived ability to; diagnose, plan an intervention program, teach even the most difficult pupils and think of alternative approaches to teaching pupils who have difficulty studying. These two components will continue to serve as the basis of the teaching experience in the HALEL clinic.

Nevertheless, the fact that at the end of the year students felt less able to influence their pupils' grades, emphasizes the need for creating a stronger discourse between the student teachers and the home class teachers.

This will enable the connection between the individual learning processes in the clinic and studies in the home class to be more significant and will enable the pupils' progress in the clinic to be expressed to a greater extent in the home class.

This research is part of an effort to dovetail with the current view that the work in education, both with school children and in teacher education, must move away from being overly descriptive and become more evidence based (see Odom, Brantlinger, Gersten, Horner, Thompson, & Harris, 2011). The research described in this paper is. However. Preliminary and in future research it will be wise to look into other variables that may explain our findings.

References

Armor, D. Conroy, P. Cox, M. King, N. McDonnel, L. Paskal, E. Pauly, E. & Zellman, G. (1976). *Analysis of School Preferred Programs in Selected Los Angeles Minority Schools*. Santa Monica, CA: Rand Corporation.

Ashton, P.A., Webb,R.B. (1986). *Making a Difference: Teachers' Sense of Efficacy and Student Achievement.* New York, Longman.

Bandura**, A.** (1991). Self-regulation of motivation through anticipatory and self regulatory mechanisms. In R. A. Dienstbier (Ed.), Perspectives on motivation: Nebraska symposium on movation (Vol. 38, pp. 69-164). Lincoln: University of Nebraska Press.

Bandura, (2002), Exercise of Personal and Collective Efficacy in Changing Societies. In F. Bandura (Ed). *self-efficacy in Changing Societies* (pp.1-45). Cambridge University Press, Cambridge.

Brownell , M. T., Sindelar, P., Kiely, M. T. (2010). Special Education Teacher Quality and Preparation: Exposing foundation, Constructing a New Model. *Exceptional Children,* VoL 76. (3). 357-377.

D'Amato, R.C., Crepeau-Hobson, F., Huang, L.V., &Geil M. (2005). Ecological Neuropsychology: An Alternative to the Deficit Model for Conceptualizing and Erving Students with Learning Disabilities. *Neuropsychology Review,* 15(2), 97-103

Darling-Hammond, L. (2006).Constructing 21st-century teacher Education .*Journal of Teacher Education,* 57(3), 300-315.

Friedman, I., Kass, E. (2002). Teacher self-efficacy: a classroom-organization conceptualization. Teaching and teacher education, 18 (6), 675-687.

Goddard, R. D., Hoy, W. K., & Woolfolk Hoy, A. (2004). Collective efficacy: Theoretical developments, empirical evidence, and future directions. *Educational Researcher*, 33(3), 3-13.

Hamman, D., Olivarez Jr., A., Lesley, M., Button, K., Chan, Y., Griffith, R., & Elliot, S. (2006). Pedagogical influence of interaction with cooperating teachers on the efficacy beliefs of student teachers. *The Teacher Educator*, 42(1), 15-29.

Howe, E. R. (2006). Exemplary teacher induction: An international review. *Educational Philosophy and Theory, 38*(3), 287-297.

Hoy, W. A. & Spero, B. R. (2005). Changes in teacher efficacy during the early years of teaching: A comparison of four measures. *Teaching and Teacher Education*, *21*, 343–356.

Hutchison, M. A., Follman, D. K., Sumpter, M., & Bodner, G. M. (2006). Factors influencing the self-efficacy beliefs of first-year engineering students. *Journal of Engineering Education*, 95, 39-47.

Jimerson, S, R., Burns, M.K. VanDerHeyden, A.M. (2007). Response to Intervention at school: The Science and Practice of Assessment and Intervention. In Shane R. Jimerson, M.k. Burns and VanDerHeyden, A.M. (eds.) Response to Intervention: The science and practice of assessment and intervention.

Lamote, C. Engels, N. (2010). The development of student teachers' professional identity. *European Journal of Teacher Education,* Vol. 33, No. 1(3–18).

Moore, W.P., Esselman, M. (1992). Teacher Efficacy, Empowerment, and a Focused Instructional Climate: Does Student Achievement Benefit? Paper presented at the Annual Conference of the American Educational Research Association (San Francisco, CA).

Odom, S. L., Brantlinger, E., Gersten, R.,. Horner R. H, Thompson, B., Harris. K. R.(2005). Research in Special Education: Scientific Methods and Evidence-Based Practices. *Exceptional Children*, Vol. 72, (1), (137-148)

Pajares, F. (2005) Current Directions in Self-efficacy Research. In M. Maehr & P. R. Pintrich (Eds.). *Advances in motivation and achievement*. Volume 10, (pp. 1-49). Greenwich, CT: JAI Press.

Pendergast, D., Garvis, S. Keogh, J. (2011). Pre-Service Student-Teacher Self-Efficacy Beliefs: An Insight Into the Making of Teachers. *Australian Journal of Teacher Education*. Vol 36(12), 46-57

Ross, J.A. Cousins, J.B. (1993). Enhancing Secondary School Students' Acquisition of correlational Reasoning skills. *Research in Science & Technology Education*. V. 11 pp. 191-206

Soodak, L. C.; Podell, D. M.; Lehman, L. R. (1998). Teacher, student, and school attributes as predictors of teachers' responses to inclusion. *Journal of Special Education*, 31 (4), pp. 480-498.

Schunk, D. H., & Pajares, F. (2005). Competence beliefs in academic functioning. In A. J. Elliot & C. Dweck (Eds.), *Handbook of competence and motivation* (pp. 85-104). New York: Guilford Press.

Swackhamer, L.E., Koellner, K. Basile,C. Kimbrough, D.(2009) . Increasing the Self-Efficacy of Inservice Teachers through Content Knowledge. Teacher Education Quarterly, spring , 63-78

Tschannen-Moran, M., Woolfok-Hoy, A., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research*, *68*(2), 202-248.

Tschannen-Moran, M., Woolfok-Hoy, A (2007). The differential antecedents of self-efficacy beliefs of novice and experienced teachers. *Teaching and Teacher education*,vol23 (6). 944-956

Usher, E. L.; Pajares, F.(2008). Sources of self-efficacy in school: Critical review of the literature and future directions. *Review of Educational Research,* 78 (4) p751-796.

Vaughn, S., Gersten, R.,Chard, D. J. (2000). The Underlying Message in LD Intervention Research: Findings from Research Syntheses. *Exceptional Children*, 67(1), 99-114.

Wenner, G.(2001). Science and mathematics efficacy beliefs held by practicing and prospective teachers: A 5-year perspective. *Journal of Science Education and Technology* , 10 (2), pp. 181-187

Woolfolk Hoy, A.(2000). Educational Psychology in Teacher Education. Educational Psychologist, 35(4), 257–270

Woolfolk Hoy, A.(2004). The educational psychology of teacher efficacy. *Educational Psychology Review* 16: 153–76.

Woolfolk Hoy, A. (2008). What motivates teachers? Important work on a complex question. *Learning and Instruction*, 18, 492-498